Thermal And Fluid Systems Branch (DEF)

Provides process systems engineering, mechanical design, thermodynamics, heat transfer, and fluid dynamics development engineering support to the GRC's space and aeronautics projects and research activities in the areas of complex system design to detailed analyses of single components, including aeropropulsion test rigs, cryogenic fluid systems, space radiators, microgravity science experiments, International Space Station, and Advanced Power Systems. Support includes: feasibility studies; conceptual design; detailed development; application, maturation, optimization, and analysis of advanced technologies; "fluids handling equipment procurement;" delivery, fabrication, assembly, and check-out of fluid systems; thermal control system design; hazards analysis; convective heat transfer analysis; computational fluid dynamics; orbital heating and radiation heat transfer.